

Amdt. dated October 29, 2003
Reply to Office action of 7/29/2003

Serial No. 09/981,560
Docket No. BLD920010018US1
Firm No. 0036.0094

REMARKS/ARGUMENTS

Claim objections

The Examiner has objected to claim 38. According to the Examiner, claim 38 depends on claim 38. However, the previously presented claim 38 depends on claim 36. Accordingly, applicants traverse the objection to claim 38.

The Examiner has rejected claims 1-5, 7-13, 15-40, 42-48 and 50-58. Applicants traverse the rejections for the reasons discussed below. Additionally, applicants have added eight new dependent claims numbered 59-66.

Claims 1-5, 8-13, 16, 19-22, 24-40, 43-48, 49, 51, 54-57 are Patentable Over the Cited Art

The Examiner rejected pending claims 1-5, 8-13, 16, 19-22, 24-40, 43-48, 49, 51, 54-57 under 35 U.S.C. §103(a) as being unpatentable over Cruz-Urbe (US 4,413,264) in view of Garr (US 5,802,420). Applicants traverse the obviousness rejections for the reasons discussed below.

[Claims 1, 24, 36] The Examiner has rejected claim 1 under 35 U.S.C. §103(a) [Office action: pages 2-3] as being unpatentable over Cruz-Urbe in view of Garr. Claim 1 describes a method for monitoring depletion of a consumable resource in a monitored system, comprising:

- receiving information on at least one unit of work to be processed by the monitored system, wherein the monitored system would deplete the consumable resource when processing each unit of work;
- determining a rate of resource depletion per unit of work processed;
- estimating an amount of resource remaining after the monitored system processes the at least one unit of work, wherein the estimate is a function of the determined rate of resource depletion and a number of the one or more units of work remaining to be processed; and

Amdt. dated October 29, 2003
Reply to Office action of 7/29/2003

Serial No. 09/981,560
Docket No. BLD920010018US1
Firm No. 0036.0094

generating a graphical element for display on a computer monitor indicating the estimated amount of the resource remaining.

Nowhere does the cited Cruz-Urbe (fig. 1; col. 1: lines 6-12; col. 1: line 64 - col. 3: line 43) or the cited Garr (figs. 1, 7; col. 13: lines 34-50; col. 18: lines 15-46) teach or suggest the claim requirement of estimating an amount of resource remaining after the monitored system processes the at least one unit of work, wherein the estimate is a function of the one or more units of work remaining to be processed.

The cited Cruz-Urbe discusses controlling the supply of print material based on a determination of the amount of material that would be required to print a given text (Cruz-Urbe: Abstract). According to the cited Cruz-Urbe, the determination is based upon a knowledge of how much print material is required for various characters and the make-up of characters in the text (Cruz-Urbe: Abstract). The cited Cruz-Urbe further describes that the overall toner requirement is determined before all the characters to be generated are printed (Cruz-Urbe: col. 3: lines 5-7). The claims require estimating an amount of resource remaining after the monitored system processes the at least one unit of work, wherein the estimate is a function of the one or more units of work remaining to be processed. Nowhere, does the cited Cruz-Urbe teach or suggest the claim requirement of estimating an amount of resource remaining after the monitored system processes the at least one unit of work, wherein the estimate is a function of the one or more units of work remaining to be processed. Moreover, Cruz-Urbe teaches away from the pending claims because the cited Cruz-Urbe discusses computing the estimate before all the characters are generated or printed (Cruz-Urbe: col. 3: lines 5-7) whereas the claims requires computing the estimate after the monitored system processes the at least one unit of work

The cited Garr discusses predicting the number of pages and/or toner in the printer remaining for printing operations. The cited Garr also discusses various gradation levels of the toner. The cited Garr further discusses change in levels of a consumable resource during a print job. Additionally, Garr describes that the prediction is based on the previous printing history of

Amdt. dated October 29, 2003
Reply to Office action of 7/29/2003

Serial No. 09/981,560
Docket No. BLD920010018US1
Firm No. 0036.0094

the printer while using this particular toner cartridge (Garr: Abstract). The claims require that the estimate be a function of the determined rate of resource depletion and a number of the one or more units of work remaining to be processed. Nowhere, does the cited Garr teach or suggest the claim requirement that the estimate is to be based on the number of the one or more units of work remaining to be processed. Moreover, Garr teaches away from the claim requirements because Garr bases the estimate on the previous printing history whereas the claim requires the estimate on the number of the one or more units of work remaining to be processed. Therefore, the cited Garr estimates the amount of resource remaining based on previously determined rate of resource depletion, whereas the claim requires the estimate to be based on the amount of work that remains to be processed. The cited Garr does not consider the amount of work that still remains to be processed in estimating the amount of resource remaining.

Therefore neither the cited Cruz-Urbe nor the cited Garr teach or suggest the claim requirement of estimating an amount of resource remaining after the monitored system processes the at least one unit of work, wherein the estimate is a function of the one or more units of work remaining to be processed. In fact, both the cited Cruz-Urbe and the cited Garr teach away from the claim requirements. The cited Cruz-Urbe teaches away from the claim requirement because in the cited Cruz-Urbe the estimate is computed before all the characters are generated or printed (Cruz-Urbe: col. 3: lines 5-7) and not after the monitored system processes the at least one unit of work as required by the claims. The cited Garr teaches away from the claim requirement because the cited Garr bases the estimate on the previous printing history whereas the claim requires the estimate on the number of the one or more units of work remaining to be processed.

For the above reasons, claim 1 is patentable over the cited art either alone or in combination. The Examiner has provided similar reasons for rejecting independent claim 24 and 36. Applicants argue that independent claims 24 and 36 are patentable over the cited art for the reasons described above for claim 1. For the above reasons, claim 24 and 36 are patentable over the cited art either alone or in combination.

Amdt. dated October 29, 2003
Reply to Office action of 7/29/2003

Serial No. 09/981,560
Docket No. BLD920010018US1
Firm No. 0036.0094

[Claims 9, 28, and 44] The Examiner has rejected independent claim 9 under 35 U.S.C. §103(a) [Office action: pages 5-6] as being unpatentable over Cruz-Urbe in view of Garr. Claim 9 is a method for monitoring depletion of a consumable resource in a printer, comprising:

- receiving a print job having print matter for at least one page;
- determining a rate of resource depletion per page;
- estimating an amount of resource remaining after the printer processes the print job as a function of a number of the at least one page in the print job and the determined rate of resource depletion; and
- generating a graphical element for display on a computer monitor indicating the estimated amount of the resource remaining.

Nowhere does the cited Cruz-Urbe (fig. 1; col. 1: lines 6-12; col. 1: lines 64 - col. 3: line 43) or the cited Garr (figs. 1, 7; col. 13: lines 34-50, col. 18: lines 15-46) teach or suggest the claim requirement of estimating an amount of resource remaining after the printer processes the print job as a function of a number of the at least one page in the print job and the determined rate of resource depletion.

The cited Cruz-Urbe discusses controlling the supply of print material based on a determination of the amount of material that would be required to print a given text (Cruz-Urbe: Abstract). According to the cited Cruz-Urbe, the determination is based upon a knowledge of how much print material is required for various characters and the make-up of characters in the text (Cruz-Urbe: Abstract). The cited Cruz-Urbe further describes that the overall toner requirement is determined before all the characters to be generated are printed (Cruz-Urbe: col. 3: lines 5-7). The claim requires estimating an amount of resource remaining after the printer processes the print job as a function of a number of the at least one page in the print job and the determined rate of resource depletion. Nowhere, does the cited Cruz-Urbe teach or suggest the claim requirement of estimating an amount of resource remaining after the monitored system processes the print job, as a function of a number of the at least one page in the print job and the

Amdt. dated October 29, 2003
Reply to Office action of 7/29/2003

Serial No. 09/981,560
Docket No. BLD920010018US1
Firm No. 0036.0094

determined rate of resource depletion. Moreover, the cited Cruz-Urbe teaches away from the pending claim because the cited Cruz-Urbe computes the estimate before all the characters are generated or printed (Cruz-Urbe: col. 3: lines 5-7) whereas the claim requires the estimate after the monitored system processes the print job.

Additionally, nowhere does the cited Garr (figs. 1, 7, col. 3: lines 24-45, col. 13: lines 34-50, col. 18: lines 15-46) teach or suggest the claim requirement of estimating an amount of resource remaining after the printer processes a print job as a function of a number of the at least one page in the print job and the determined rate of resource depletion per page. The cited Garr discusses predicting the number of pages and/or toner remaining for printing operations. The cited Garr also discusses various gradation levels of the toner. The cited Garr also discusses change in levels of a consumable resource during a print job. Garr further describes that the prediction is based on the previous printing history of the printer while using this particular toner cartridge (Garr: Abstract). The claim requires that the estimate is a function of a number of the at least one page in the print job and the determined rate of resource depletion per page. Nowhere, does the cited Garr teach or suggest the estimate to be based on the rate of resource depletion per page as required by the claim. The cited Garr teaches away from the claim requirements, because Garr bases the prediction on the previous printing history whereas the claim requires the prediction to be based on the rate of resource depletion per page of a print job. Furthermore, the cited Garr does not teach estimating while a print job is being processed based on characteristics of the print job being processed. Therefore, the cited Garr estimates the amount of resource remaining based on previously determined rate of resource depletion, whereas claim 9 requires the estimate to be based on estimating an amount of resource remaining after the printer processes the print job as a function of a number of the at least one page in the print job and the determined rate of resource depletion per page of the print job. The cited Garr does not take into account the print job (such as the at least one page) while estimating the amount of resource remaining.

Amdt. dated October 29, 2003
Reply to Office action of 7/29/2003

Serial No. 09/981,560
Docket No. BLD920010018US1
Firm No. 0036.0094

Therefore neither the cited Cruz-Urbe nor the cited Garr teach or suggest the claim requirement of estimating an amount of resource remaining after the printer processes the print job as a function of a number of the at least one page in the print job and the determined rate of resource depletion. In fact, both the cited Cruz-Urbe and the cited Garr teach away from the claim requirements. The cited Cruz-Urbe teaches away from the claim requirement because in the cited Cruz-Urbe the estimate is computed before all the characters are generated or printed (Cruz-Urbe: col. 3: lines 5-7) and not after the monitored system processes the print job as required by the claims. The cited Garr teaches away from the claim requirement because the cited Garr bases the estimate on the previous printing history whereas the claim requires the estimate as a function of a number of the at least one page in the print job and the determined rate of resource depletion per page of the print job.

For the above reasons, claim 9 is patentable over the cited art either alone or in combination. The Examiner has provided similar reasons for rejecting independent claim 28 and 44. Applicants argue that independent claims 28 and 44 are patentable over the cited art for the reasons described above for claim 9. For the above reasons, claim 28 and 44 are patentable over the cited art either alone or in combination.

[Claims 2-8, 10-23, 25-27, 29-35, 37-43, 45-58] The Examiner has also rejected pending claims 2-8, 10-23, 25-27, 29-35, 37-43, 45-58 where pending claims 2-8, 10-23, 25-27, 29-35, 37-43, 45-58 depend directly or indirectly on independent claims 1, 9, 24, 28, 36, 44 which are patentable over the cited art for the reasons discussed above. Therefore, pending claims 2-8, 10-23, 25-27, 29-35, 37-43, 45-58 are patentable over the cited art. Moreover, the following of these claims provide additional grounds of patentability over the cited art for the reasons discussed below.

Amdt. dated October 29, 2003
Reply to Office action of 7/29/2003

Serial No. 09/981,560
Docket No. BLD920010018US1
Firm No. 0036.0094

[Claims 4, 8, 21, 27, 35, 56] The Examiner has rejected claims 4, 8, 21, 27, 35, 56 under 35 §U.S.C. 103(a) as unpatentable over Cruz-Urbe in view of Garr (page 4 of the Office Action).

Claim 4 depends on pending independent claim 1, and further comprises:

estimating a number of units of work that can be processed with the estimated amount of the resource remaining; and

generating information to display with the generated graphical element indicating the estimated number of units of work.

Nowhere does the cited Garr (figs. 1, 7, col. 3 lines 13-45, col. 13. Lines 34-50, col. 18. Lines 15-46) teach or suggest the claim requirement of estimating the number of units of work that can be processed with the estimated amount of resource remaining. The cited Garr discusses different toner sizes, i.e. consumable resources. However, nowhere does the cited Garr teach or suggest estimating the number of units of work that can be processed with the estimated amount of resource remaining. The cited Garr indicates the amount of resource remaining. However, the amount of resource remaining is based on prior rate of resource consumption and not on the current job. Neither does the cited Cruz-Urbe teach or suggest the claim requirement of estimating the number of units of work that can be processed with the estimated amount of resource remaining.

For the above reasons, claims 4, 8, 21, 27, 35, 56 are patentable over the cited art either alone or in combination,

[Claims 5, 13, 26] The Examiner has rejected claims 5, 13, and 26 under 35 §U.S.C. 103(a) as unpatentable over Cruz-Urbe in view of Garr (page 3 of Office Action). Claim 5 depends on pending independent claim 1, and further requires:

receiving notification that the consumable resource is depleted in the monitored system;
and

Amdt. dated October 29, 2003
Reply to Office action of 7/29/2003

Serial No. 09/981,560
Docket No. BLD920010018US1
Firm No. 0036.0094

determining an adjustment factor if the estimated amount of resource remaining is not estimated to be depleted, wherein the adjustment factor is applied when estimating the amount of resource remaining during use of the monitored system after the consumable resource is replenished in the monitored system.

Nowhere does the cited Cruz-Urbe (Fig. 1; col. 1: lines 14-22; col. 1: lines 64 - col. 2: line 66; col. 3: lines 2-43) teach or suggest applying the adjustment factor when estimating the amount of resource during use of the monitored system. The cited Cruz-Urbe discusses measuring devices and automatically replenishment of print material. The cited Cruz-Urbe also discusses ways of computing toner requirements. However, the cited Cruz-Urbe does not teach or suggest determining an adjustment factor when estimating the amount of resource remaining during use of the monitored system. Neither does the cited Garr teach or suggest the claim requirements of applying the adjustment factor. Therefore, claim 5 is patentable over the cited art alone and in combination. Claims 13 and 26 is patentable for the similar reasons as the patentability of claim 5.

Added dependent claims 59-66

The requirements of added dependent claims 59-66 can be found in at least original claims 6, 14, 41, and 49 and in pages 4-13 of the specification.

Conclusion

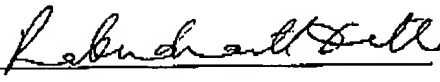
For all the above reasons, Applicant submits that the pending claims 1-66 are patentable over the art of record. Applicants have not added six new dependent claims and indicated the payment of appropriate fees. Nonetheless, should any additional fees be required, please charge Deposit Account No. 50-0585.

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

Amdt. dated October 29, 2003
Reply to Office action of 7/29/2003

Serial No. 09/981,560
Docket No. BLD920010018US1
Firm No. 0036.0094

Dated: October 29, 2003

By: 
Rabindranath Dutta
Registration No. 51,010

Please direct all correspondences to:

David Victor
Konrad Raynes Victor & Mann, LLP
315 South Beverly Drive, Ste. 210
Beverly Hills, CA 90212
Tel: 310-553-7977
Fax: 310-556-7984